

Cal/Ecotox
Exposure Factors for Peregrine Falcon (Falco peregrinus)\*

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Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Age at Sexual Maturity	2.8 (female); 2.6 (male)			yr	B	Adult	AK	a	1
Age at Sexual Maturity	review				NR	Adult	USA	b	2
Body Weight - Mean	41.7		30.4 - 46.9	g	NR	Embryo	CANADA	c	3
Body Weight - Mean	see citation			g	B	Nestling	CANADA	d	4
Clutch or Litter Size	3.09			eggs or downy chicks/nest	B	Adult	AK	e	5
Clutch or Litter Size	3.39			eggs/clutch	F	Adult	AK	f	6
Clutch or Litter Size	3.3			eggs/nest	F	Adult	MEXICO	g	7
Clutch or Litter Size	review				F	Adult		h	8
Clutch or Litter Size			2 - 4	eggs/nest	F	Adult	CA	i	9
Clutch or Litter Size	3.3			eggs/clutch	F	Adult	CANADA	j	3
Clutch or Litter Size	3.21		1-4	eggs/nest	F	Adult	GERMANY	k	10
Clutch or Litter Size	3.70		1-5	eggs/clutch	F	Adult	CANADA; MEXICO; USA	l	11
Clutch or Litter Size	3.62	0.59 SD		eggs/clutch	F	Adult	AK	m	12
Clutch or Litter Size	review				F; NR	Adult	USA	n	2
Dietary Composition	review				NR	Adult	USA	o	2
Dietary Composition	waterfowl (50%), shorebirds (10-12%), small gulls (10-15%), small land birds (20%), small mammals (2-3%)				B	Adult; Chick	AK	p	5
Dietary Composition	Holboell's grebe (2.4%); green-winged teal (9.7%); buffle-head (2.7%); sparrow hawk (2.4%); spruce grouse (2.4%); ruffed grouse (2.4%); lesser yellow-legs (9.7%); gulls (19.6%); hawk owl (2.4%); northern flicker (2.4%); Alaska jay (12.5%); Hudsonian chickadee (2.4%); gray-cheeked thrush (2.4%); rusty blackbird (2.4%); pine grosbeak (2.4%); robin (4.9%); unidentified passerines (17.0%)			% total prey	NR	NR	AK	q	13
Duration of Incubation or Gestation	review				NR	Adult	USA	r	2
Fledging or Weaning Rate	1.80			fledglings/nest	B	Adult	AK	s	5
Fledging or Weaning Rate	2.24			young fledged/pair	B	Adult	NJ	t	14
Fledging or Weaning Rate			2.45 - 2.94	young/successful nest	B	Adult	CANADA	u	15
Fledging or Weaning Rate	1.64			fledglings/pair	B	Adult; Juvenile	NM	v	16
Fledging or Weaning Rate	1.78			fledglings/nest	B	Fledgling	AK	w	6
Fledging or Weaning Rate	2.6			fledglings/active nest	B	Fledgling	MEXICO	x	7

Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Fledging or Weaning Rate	review				B	Fledgling		y	8
Fledging or Weaning Rate			1.6 - 2.0	young/pair	B	Fledgling	CA	z	9
Fledging or Weaning Rate	2.46		1-4	fledglings/b rood	B	Fledgling	GERMANY	aa	10
Fledging or Weaning Rate	2.6			fledglings/pa ir	B	Fledgling	GERMANY	ab	17
Fledging or Weaning Rate	1.91		0.54-2.35	fledglings/n est	B	Fledgling	AK	ac	12
Fledging or Weaning Rate	review				B	Fledgling	USA	ad	2
Foraging Distance	7.5-28.0			km	B	Adult	TX	ae	18
Foraging Distance	9.2			km	F	Adult	SOUTH AFRICA	af	19
Foraging Distance	11.1-16.4			km	M	Adult	SOUTH AFRICA	ag	19
Hatching Success	1.8			young/succ essful nesting	B	Hatchling	MEXICO	ah	20
Hatching Success	87%			%	B	Hatchling	AK	ai	12
Home Range	89.7-94.7			square km	F	Adult	SOUTH AFRICA	aj	19
Home Range	115.2-192.1			square km	M	Adult	SOUTH AFRICA	ak	19
Longevity	12-03			yr-mo	NR	Adult	USA	al	21
Longevity	15			years	NR	Adult	GERMANY	am	22
Population Density	17			pairs/172 miles of river	B	Adult	AK	an	5
Population Density			5.6 (2.4) - 8.0 (6.9)	km	B	Adult	AZ	ao	23
Population Density	1 pair per 17sq. km			pairs	B	Adult	AK	ap	12
Population Density	review				B	Adult		aq	24
Population Density	review				B	Adult	USA	ar	2
Population Density	one bird/50 sq. km				B	Adult	TX	as	18
Survival/ Mortality	review				B	Adult		at	8
Survival/ Mortality	23			%	B	Adult	CANADA	au	4
Survival/ Mortality	43			%	B	Adult	CANADA	av	4
Survival/ Mortality	16			%	B	Adult	CO	aw	25
Survival/ Mortality			29-33	%	F	Adult	AK	ax	1
Survival/ Mortality	25			%	NR	Adult	CANADA; USA	ay	26
Survival/ Mortality			19-28	%	NR	Both Adult and Juv.	FINLAND; GERMANY	az	22
Survival/ Mortality			40-60	%	NR	Fledgling	GERMANY	ba	17
Survival/ Mortality	68			%	NR	Juvenile	CANADA; USA	bb	26
Survival/ Mortality			56-71	%	NR	Juvenile	FINLAND; GERMANY	bc	22
Time of Fledging or Metamorphosis	May - June				B	Hatchling	MEXICO	bd	7
Time of Hatching or Parturition	Mar. - Apr.				B	Hatchling	MEXICO	be	7
Time of Hatching or Parturition	Apr.				B	Hatchling	MEXICO	bf	20
Time of Mating/ Laying	Feb. - Mar.				B	Adult	MEXICO	bg	20
Time of Mating/ Laying	Feb. - Mar.				F	Adult	MEXICO	bh	7
Time of Mating/ Laying	May - June				F	Adult	CANADA	bi	3
Time of Mating/ Laying	review				NR	Adult	USA	bj	2
Time of Nesting	Mar. - June				F	Adult	MEXICO	bk	7

**Notes**  
a mean age when first captured as a breeding adult; N=20 females; 5 males; Colville, Sagavanirktok, Yukon, and Tanana Rivers; These values are probably biased towards the "high side".

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b	N=NR
c	mean egg weight; N=13; Thelon River, Northwest Territories; 10 eggs contained large embryos
d	figure of nestling weights at various ages; N=NR; Queen Charlotte Islands, British Columbia (lat., 54°oN; long., 113°oW)
e	average number of eggs or downy chicks per pair; N=11 pairs; Condition=breeding; June-July; Yukon River
f	mean clutch size; N=18 clutches; Data are for nests with eggs containing < 15.0 to > 30.0 ppm DDE, wet wt.
g	average clutch size; N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California
h	N=NR
i	range for two sites over two yrs; N=4
j	mean clutch size; N=29; Thelon River, Northwest Territories; mean brood size (young/clutch) = 2.9
k	N=24 nests; Southern Germany; Data were collected from 1947-1959.
l	average clutch size; N=77 clutches; Data were obtained from egg collections, and do not represent a random population sampling. See citation for historical distribution, population size, density, and prey use information.
m	mean number of eggs laid per nest attempt; N=84 nest attempts; Condition=breeding; May, June, July; Rankin Inlet, Hudson Bay (62 deg49'N, 92 deg05'W)
n	N=NR
o	N=NR
p	dietary contribution of groups of species, by weight, based on collection of remains at nests; N=329 prey items; Condition=breeding; June-July; Yukon River; See citation for all prey species found at nests.
q	estimated from prey item remains lying about the bluffs in study area; N=52 prey items; October; Tanana River, Chena
r	N=NR
s	average number of fledged or nearly fledged young per occupied cliff; N=12 pairs; Condition=breeding; June-July; Yukon River
t	mean fledging rate for pairs fledging >1 young; estimated over a 10 yr period; N=42; coastal habitats
u	range over 2 yrs; N=11 - 18 nests; July - Aug.; Wager Bay, Northwest Territories
v	fledging rate per adult pair; N=125 territories; Condition=breeding; Sixty-seven percent of pairs successfully fledged young (1979-1985). Mean brood size was 2.48 young/nest.
w	mean number of fledglings per nest; N=18 clutches; Data are for nests with eggs containing < 15.0 to > 30.0 ppm DDE, wet wt.
x	average fledging rate; N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California
y	N=NR
z	range over 2 yrs; N=7 - 9 pairs
aa	N=48 broods; See citation for data on individual broods.
ab	N=NR
ac	representative number of fledglings per nest attempt in a "normal year"; N=101 pairs; Condition=breeding; May, June, July; Rankin Inlet, Hudson Bay (62 deg49'N, 92 deg05'W)
ad	N=NR
ae	range of distances between the most distant locations; N=8 birds; winter; near the Laguna Madre; All data are for radiotelemetered birds.
af	maximum distance travelled from nest cliff; N=2; Cape Peninsula
ag	maximum distance travelled from nest cliff; N=2; Cape Peninsula
ah	average over 4 yr study period; N=NR; Sierra Madre Oriental, Nuevo Leon; also reported as 1.1 young/active site and 1.3 young/pair
ai	ratio of total eggs hatched to total eggs produced; N=101 pairs; Condition=breeding; May, June, July; Rankin Inlet, Hudson Bay (62 deg49'N, 92 deg05'W)
aj	range of home range sizes; N=2; Cape Peninsula
ak	range of home range sizes; N=2; Cape Peninsula
al	from USFWS Bird Banding Laboratory data; N=321 band recoveries
am	N=1 bird; Recovered bird had been shot
an	N=17 pairs; Condition=breeding; June-July; Yukon River; Average distance between occupied cliffs = 10.6 miles (range 2-31 miles).
ao	range of mean distances (SE) between adjacent nests; N=3 sites, 9-26 nests per site; Condition=breeding; May, June; Grand Canyon National Park
ap	N=6 survey years; 17-26 territories per year; Condition=breeding; May, June, July; Rankin Inlet, Hudson Bay (62 deg49'N, 92 deg05'W)
aq	review of factors controlling population density; N=NR; It was concluded that breeding populations are limited primarily by availability of nesting territories.
ar	N=NR
as	estimated minimum density; N=20 birds; winter; near the Laguna Madre
at	N=NR
au	percent of adults lost before next breeding season; adults produced brood sizes of 0-2; N=60; Queen Charlotte Islands, British Columbia (lat., 54°oN; long., 113°oW)
av	percent of adults lost before next breeding season; adults produced brood sizes of 3-4; N=44; Queen Charlotte Islands, British Columbia (lat., 54°oN; long., 113°oW)
aw	average maximum loss rate; estimated by number of individuals returning to nest in 2 successive yrs; N=23 - 34 cases
ax	range of annual mortality rates over 3 years, corrected for known movements; N=7-11 recaptured birds/yr; Colville, Sagavanirktok, Yukon, and Tanana Rivers

ay	mortality rate; N=81 birds banded as nestlings; all year; Estimates are based on band recovery data.
az	mortality rate in Germany and Finland of ringed birds; N=209 birds; Age=1-14 years; See Lack (1943) for methods.
ba	brood survival; increase to 60% in 1991, due to protective measures; N=NR
bb	mortality rate; N=27 birds; Age=0-1 year; all year; Estimates are based on band recovery data.
bc	mortality rate of ringed young birds; N=134 birds; Age=0-1 year
bd	N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California
be	N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California
bf	N=NR; Sierra Madre Oriental, Nuevo Leon
bg	time of mating; N=NR; Sierra Madre Oriental, Nuevo Leon
bh	time of laying; N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California
bi	time of laying; N=19; Thelon River, Northwest Territories
bj	N=NR
bk	time when eggs were laid to time when all young abandoned nests; N=3 breeding pairs; Ojo de Liebre Lagoon, Baja California

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